

**AMENDMENTS TO THE CLAIMS**

**1. (Currently Amended)** A blood purification device comprising:

- a blood circuit having an arterial blood circuit and a venous blood circuit;
- a blood pump disposed in said arterial blood circuit;
- a blood purifier connected to the blood circuit between said arterial blood circuit and said venous blood circuit, and configured to purify blood flowing in said blood circuit;
- a first measuring unit disposed in said arterial blood circuit and configured to measure a blood concentration of said arterial blood circuit;
- a second measuring unit disposed in said venous blood circuit and configured to measure a blood concentration of said venous blood circuit;
- a calculating unit configured to calculate a first measurement value and a first theoretical value, ~~[[the]]~~ said first measurement value referring to a ratio of said blood concentrations measured by said first measuring unit and said second measuring unit, and ~~[[the]]~~ said first theoretical value referring to a blood concentration ratio obtained by at least one formula based on parameters including a preset blood flow rate of said blood pump and a preset blood purifying rate of said blood purifier; ~~and~~
- an evaluation unit configured to evaluate whether a difference between said first measurement value and said first theoretical value ~~are approximately equal~~ is larger than a predetermined acceptable ratio difference; and

a reporting unit configured to report when the difference between said first measurement value and said first theoretical value is larger than the predetermined acceptable ratio difference,  
wherein

~~said calculating unit performs a calculation in response to a result of evaluation by said evaluation unit to determine a performance of~~ when the difference between said first measurement value and said first theoretical value is larger than the predetermined acceptable ratio difference, the reporting unit reports a trouble condition for at least one of said blood pump and said blood purifier ~~using said at least one formula.~~

**2. (Previously Presented)** The blood purification device of claim 1, wherein:

said blood purifier includes a water removing unit connected to said blood purifier and configured to remove water from blood flowing in said blood purifier; and

said preset blood purifying rate is a preset water removal rate of said water removing unit.

**3. (Previously Presented)** The blood purification device of claim 2, further comprising:

a substitution fluid supplying unit configured to supply a substitution fluid into said blood circuit, wherein

said calculating unit configured to calculate a theoretical value referring to a ratio of the blood concentrations obtained by the at least one formula based on parameters including a preset substitution fluid supplying rate of said substitution fluid supplying unit and a filtration rate of said blood purifier in addition to said preset blood flow rate and said preset water removal rate.



9. (New) A method for monitoring for a trouble condition associated a blood purification device, the method comprising the steps of:

disposing a blood pump in an arterial blood circuit of said blood purification device;

connecting a blood purifier between said arterial blood circuit and a venous blood circuit of the blood purification device, said blood purifier being configured to purify blood flowing in said blood circuit;

measuring a blood concentration of said arterial blood circuit;

measuring a blood concentration of said venous blood circuit;

calculating a measurement value and a theoretical value, the measurement value referring to a ratio of said blood concentrations of said arterial blood circuit and said venous blood circuit, and the theoretical value referring to a blood concentration ratio obtained by at least one formula based on parameters including a preset blood flow rate of said blood pump and a preset blood purifying rate of said blood purifier;

evaluating whether a difference between said measurement value and said theoretical value is larger than a predetermined acceptable ratio difference; and

reporting the difference between said measurement value and said theoretical value when that difference is larger than the predetermined acceptable ratio difference, wherein said reporting unit indicates a trouble condition for at least one of said blood pump and said blood purifier.